

SEQUENCE LISTING

<110> Chauhan, Sarita
DiCosimo, Robert
Payne, Mark
Gavagan, John
Fallon, Robert

<120> Isolation and Expression of a Gene for Nitrilase from
Acidovorax Facilis 72W

<130> BC-1032 US NA

<140>
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<150> 60/193,707
<151> March 31, 2000

<160> 32

<170> Microsoft Office 97

<210> 1
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Forward primer
(1F)

<220>
<223> K= G or T, M= A or C, S= G or C, Y= C or T

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17

<210> 2
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Reverse primer
(7R)

<220>
<223> S= G or C, H= A or C or T, M= A or C, R= A or G,
Y= C or T

<400> 2
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17

<210> 3
<211> 385
<212> DNA
<213> Acidovorax facilis

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caaaatcgca ctcgatcatgg gctattcgga gcgggaagcc ggatcgcgct atctgagcca
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ggtgttcacg gacgagcgtg gcgagatcgt tgccaatcgg cgcaagctga agccacaca
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cgttgagcgt acgatctacg gcgaaggcaa cggaaccgat ttcctcacgc acgacttcgc
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385

<210> 4
<211> 1110
<212> DNA
<213> Acidovorax facilis

<400> 4
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120
gcgagtctga tcgctttccc ggaagtattc attccgggct acccctattg ggcgtggctc
180
ggcgacgtga agtacagcct aagctttact tcacgctatc acgagaattc gttggagcta
240
ggtgacgacc gtatgcgtcg cctccagctg gccgcgcgcc gcaacaaaat cgcactcgtc
300
atgggctatt cggagcggga agccggatcg cgctatctga gccaggtgtt catcgacgag
360
cgtggcgaga tcgttgccaa tcggcgcaag ctgaagccca cacacgttga gcgtacgatc
420
tacggcgaag gcaacggaac cgatttcctc acgcacgact tcgcgttcgg acgcgtcggg
480
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gacgaggtcc acgttgcatc gtggccggcg atgtcccctc ttcagccgga tgttttccaa
600
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720
gaacagcgcg cactgttgcc gcaaggatgt ggctgggccc gcatttacgg cccggatgga
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960
gacggtcgct tggatgtgaa taccgcgagt cgcgtggaga atttccgact gcgacaagcg
1020
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1110

<210> 5

<211> 369
 <212> PRT
 <213> Acidovorax facilis

<400> 5

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Ile	Glu	Glu	Ala	Ala	Gln	Lys	Gly	Ala	Ser	Leu	Ile	Ala	Phe	Pro	Glu
			35				40					45			
Val	Phe	Ile	Pro	Gly	Tyr	Pro	Tyr	Trp	Ala	Trp	Leu	Gly	Asp	Val	Lys
	50					55					60				
Tyr	Ser	Leu	Ser	Phe	Thr	Ser	Arg	Tyr	His	Glu	Asn	Ser	Leu	Glu	Leu
65					70					75					80
Gly	Asp	Asp	Arg	Met	Arg	Arg	Leu	Gln	Leu	Ala	Ala	Arg	Arg	Asn	Lys
				85					90					95	
Ile	Ala	Leu	Val	Met	Gly	Tyr	Ser	Glu	Arg	Glu	Ala	Gly	Ser	Arg	Tyr
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Leu	Ser	Gln	Val	Phe	Ile	Asp	Glu	Arg	Gly	Glu	Ile	Val	Ala	Asn	Arg
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Gly	Leu	Asn	Cys	Trp	Glu	His	Phe	Gln	Pro	Leu	Ser	Lys	Phe	Met	Met
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Gly	Pro	Asp	Gly	Ser	Glu	Leu	Ala	Lys	Pro	Leu	Ala	Glu	Asp	Ala	Glu
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Gly	Ile	Leu	Tyr	Ala	Glu	Ile	Asp	Leu	Glu	Gln	Ile	Leu	Leu	Ala	Lys
		275					280					285			
Ala	Gly	Ala	Asp	Pro	Val	Gly	His	Tyr	Ser	Arg	Pro	Asp	Val	Leu	Ser
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Val	Gln	Phe	Asp	Pro	Arg	Asn	His	Thr	Pro	Val	His	Arg	Ile	Gly	Ile
305					310					315					320

Asp Gly Arg Leu Asp Val Asn Thr Arg Ser Arg Val Glu Asn Phe Arg
 325 330 335

Leu Arg Gln Ala Ala Glu Gln Glu Arg Gln Ala Ser Lys Arg Leu Gly
 340 345 350

Thr Lys Leu Phe Glu Gln Ser Leu Leu Ala Glu Glu Pro Val Pro Ala
 355 360 365

Lys

<210> 6
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Primer

<400> 6
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 27

<210> 7
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 7
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 28

<210> 8
 <211> 31
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Primer

<400> 8
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 31

<210> 9
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Primer

<400> 9
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 23

<210> 10
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 10
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29

<210> 11
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 11
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<210> 12
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 12
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23

<210> 13
<211> 1110
<212> DNA
<213> Acidovorax facilis

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240
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360
cgtggcgaga tcgttgccaa tcggcgcaag ctgaagccca cacacgttga gcgtacgatc
420
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480

ggattgaact gctgggaaca tttccaaccg ctcagcaagt tcatgatgta cagcctcggg
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 1110

<210> 14
 <211> 369
 <212> PRT
 <213> Acidovorax facilis

<400> 14
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 35 40 45
 Val Phe Ile Pro Gly Tyr Pro Tyr Trp Ala Trp Leu Gly Asp Val Lys
 50 55 60
 Tyr Ser Leu Ser Phe Thr Ser Arg Tyr His Glu Asn Ser Leu Glu Leu
 65 70 75 80
 Gly Asp Asp Arg Met Arg Arg Leu Gln Leu Ala Ala Arg Arg Asn Lys
 85 90 95
 Ile Ala Leu Val Met Gly Tyr Ser Glu Arg Glu Ala Gly Ser Arg Tyr
 100 105 110
 Leu Ser Gln Val Phe Ile Asp Glu Arg Gly Glu Ile Val Ala Asn Arg
 115 120 125
 Arg Lys Leu Lys Pro Thr His Val Glu Arg Thr Ile Tyr Gly Glu Gly
 130 135 140
 Asn Gly Thr Asp Phe Leu Thr His Asp Phe Ala Phe Gly Arg Val Gly
 145 150 155 160
 Gly Leu Asn Cys Trp Glu His Phe Gln Pro Leu Ser Lys Phe Met Met
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 Tyr Ser Leu Gly Glu Gln Val His Val Ala Ser Trp Pro Ala Met Ser

[illegible]

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<212> DNA
<213> Acidovorax delafieldii
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gcgctatctg 720	agccagggtgt	tcatcgacga	gcgtggcgag	atcgttgcca	atcggcgcaa
gctgaagccc 780	acacacgttg	agcgtacgat	ctacggcgaa	ggcaacggaa	ccgatttcct
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ccgctcgtac 1020	gcaatcgaag	gccaaacctt	tgtgctttgc	tcgacgcagg	tgatcggacc
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gcacgcgcgt 1620	cgcgtgagat	ttgcgtcaga	gcggacattc	aagttgtgtg	gcaaggtcgt
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ggccgtgttc 1740	ctgtggccgc	ctgacgaatg	ccgtcctcag	gccacaacgt	cgagcggctg
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<210> 16
<211> 1110
<212> DNA
<213> Artificial Sequence
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atggggttatt ccgagagaga agctggatct cgttacttgt cccaagtctt catcgacgag
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 1110

<210> 17

<211> 84

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Synthetic
oligonucleotide

<400> 17

catgaattca tggtttctta caactccaag ttcttggctg ctactgttca agctgagcca
 60
 gtttgggttg acgcagacgc tact
 84

<210> 18

<211> 90

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Synthetic
oligonucleotide

<400> 18

tttgatcgct ttcccagaag ttttcattcc aggttaccca tactgggcct ggttgggtga
 60
 cgtaagtac tctttgtcct ttacttccag
 90

<210> 19

<211> 90

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:Synthetic
 oligonucleotide

 <400> 19
 aattggctgc ccgtagaaac aaaattgctt tggtcattggg ttattccgag agagaagctg
 60
 gatctcgtaa cttgtcccaa gtcttcacg
 90

 <210> 20
 <211> 90
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:Synthetic
 Oligonucleotide

 <400> 20
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 ttccgaagag ttggtggatt gaactgttgg
 90

 <210> 21
 <211> 90
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

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 <210> 22
 <211> 90
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

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 90

 <210> 23
 <211> 90

<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

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<210> 24

<211> 90

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
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gcaggagaga caggcttcta agagacttgg
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<210> 25

<211> 84

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 25

catgaattct tacttggctg ggacaggttc ttcagccaaa agagattggt cgaaaagttt
60
agttccaagt ctcttagaag cctg
84

<210> 26

<211> 90

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 26

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ggtcgaactg gacggacaag acgtcaggtc
90

<210> 27

<211> 90

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:Synthetic
 oligonucleotide

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 tcagatccat ctggaccgta aattcttgcc
 90

 <210> 28
 <211> 90
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:Synthetic
 oligonucleotide

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 60
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 90

 <210> 29
 <211> 90
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:Synthetic
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 <400> 29
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 60
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 90

 <210> 30
 <211> 90
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 30
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 90

 <210> 31
 <211> 90

<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 31

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<210> 32

<211> 90

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<400> 32

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